



Proposed Code Change  
State Form 41186R

RETURN TO:  
INDIANA DEPARTMENT OF HOMELAND SECURITY  
CODE SERVICES SECTION  
302 W. Washington Street Room W246  
Indianapolis, IN 46204

FOR OFFICE USE ONLY

Received

Code

INSTRUCTIONS:

Only TYPED copy accepted.  
(KEY- Dashed line through material to be deleted , underline material to be added )

Code Title International Residential Code		Edition 2006
Section number and title R806.4, Roof-ceiling construction		Page 286, 287
Proponent Chuck Skopelja, DEMILEC ( USA)	Title Technical Sales Representative	
Address 15047 Horseshoe Drive, Carmel, IN., 46033		Phone cell, (317) 432-3043

PROPOSED CODE CHANGE (Check One)

☐ Change to read as follows ☒ Add to read as follows ☐ Delete and substitute as follows ☐ Delete without substitution

**R806.4 Conditioned attic assemblies.** Unvented conditioned attic assemblies (spaces between the ceiling joists of the top story and the roof rafters) are permitted under the following conditions:

- No interior vapor retarders are installed on the ceiling side (attic floor) of the unvented roof assembly.
- An Air-impermeable insulation is applied in direct contact with the underside/interior of the structural roof deck. "Air-impermeable" shall be defined by ASTM E 283.  
**Exception:** In Zones 2B and 3B, insulation is not required to be air-impermeable.
- In warm humid locations as defined in Section N1101.2.1
  - For asphalt roofing shingles: A 1 perm or less vapor retarder (determined by using procedure B of the ASTM E 96) is placed to the exterior of the structural roof deck; that is, just above the structural roof deck.
  - For wood shingles and shakes: a minimum continuous ¼" (6mm) vented air space separates the shingles/shakes and the roofing felt placed over the structural sheathing.
- In Zones 3 through 8 as defined in Section N1101.2, sufficient insulation is installed to maintain the monthly average temperature of the condensing surface above 45 degrees F (7 degrees C).  
The condensing surface is defined as either the structural roof deck or the interior surface of the air-impermeable insulation applied in direct contact with the underside/interior of the Structural roof deck. "Air-impermeable is quantitatively defined by ASTM E 283. For calculation purposes, an interior temperature of 68 degrees F (20 degrees C) is assumed. The exterior temperature is assumed to be the monthly average outside temperature.

Note 1. This conditioned attic space is inside the buildings thermal envelope, therefore, the traditional ventilation required in sections R806.1 and R806.2, is not required.

Note 2. The provisions of this section consider the attic assembly as a "conditioned" space; there is no requirement for the space to be provided with a conditioned air supply.

Code Title International Residential Code		Edition 2006
Section number and title R806.4, Roof-ceiling construction		Page 286, 287
Proponent Chuck Skopelja, DEMILEC ( USA)	Title Technical Sales Representative	
Address 15047 Horseshoe Drive, Carmel, IN., 46033		Phone cell, (317) 432-3043
REASON		
<p>The Section R806.4 "Conditioned attic assemblies" are as written above, containing conditions 1-4, as part of the International Residential Code (IRC) of 2006. The Indiana Residential Building Code is based on the IRC 2003 which does not contain the R806.4 Section. There was also a supplement written for the IRC 2003 in 2004, but was not adopted by the state of Indiana.</p> <p>Also, the Notes 1 &amp; 2 added below condition 4 above, are taken from the IRC 2006 Code Commentary regarding the R806.4 section, and are asked to be added to eliminate confusion when considering ventilation and supplying conditioned air to this space.</p> <p>Currently, the applicators of polyurethane spray foam insulation, which meets the air-impermeable definition as defined by ASTM E 283, present ICC Evaluation Service Reports (Demilec USA, ICC ES 1172) to Indiana Building Code officials or have to apply for, using the alternate methods and materials section of the Indiana Residential Building code, to get this type of installation approved. This can be a rather lengthy process, and in my experiences with Indiana Building Code officials, have always recognized the advantages of the conditioned attic assembly and accepted it after the documents were presented. This assembly has currently been approved and installed in over 50 counties in Indiana over the last 5 years without any negative performance issues.</p> <p>The "Conditioned attic assembly" saves up to 50% or more on heating and cooling bills for the homeowner in comparison to air-permeable insulations. It also eliminates wind driven rain and snow from entering the attic area, eliminates condensation on the underside of roof sheathing by sealing and protecting it from damage caused by condensation, and insulates ventilation systems by keeping them in a conditioned space.</p> <p>Additionally, stack effect or upwards air movement is greatly reduced or eliminated and downsizing of the HVAC system can be realized since the Air Changeovers/Hour are reduced from 0.4 ACH to 0.1 ACH when compared to air-permeable insulations.</p> <p>We are asking the Indiana Building Association's Code Review Committee to adopt the R806.4 section of the 2006 IRC as shown above to help in understanding the conditioned attic assembly and expedite the acceptance of the "Conditioned Attic" as part of the Indiana Residential Building code or codes that are being reviewed and adopted for 2009 of this year.</p> <p>Note: The R806.4 was adopted in October of 2008 and made part of the Michigan Residential Code.</p>		
REVIEW RECOMMENDATION		
Approve		
Disapprove		
Approve as amended		
Further Study		